

## Technical report

### THE BIAS (BULLYING IN SICILIAN SCHOOL) PILOT STUDY: INVESTIGATING THE PREVALENCE OF BULLYING IN SCHOOL OF PALERMO CITY. A RESEARCH STUDY PROTOCOL.

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#### ABSTRACT

Being a serious threat to physical and emotional health of children and adolescents all over the world, bullying in school represents an important public health issue. Since 2007, in Italy, the Ministry of Education (MIUR) has promoted activities to face and prevent bullying in schools of all levels while at the same time national and local Health Authorities have implemented effective social-health strategies.

To date, the lack of consistent data needed to properly describe the concerning increase of this Public Health phenomenon prevents both the ability to systematically survey and measure the effectiveness of the public health strategies against bullying.

The Bullying In Sicilian Schools (BIAS) pilot study’s aims: i) to estimate the prevalence of bullying in a sample of secondary first-grade schools of Palermo, the largest city in Sicily, investigating its characteristics, and ii) to assess the feasibility of alternative methods for the detection of the prevalence of bullying in schools. Here we present the research protocol and the questionnaires that will be used.

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## 1. Background

Being a serious threat to physical and emotional health of children and adolescents all over the world, bullying in schools has become an important public health issue (1-5).

According to a widely used research definition of bullying, a student is being bullied or victimized when he or she is exposed, repeatedly and over time, to negative actions by one or more students (6). Negative actions are further defined as when someone (the “perpetrator”) intentionally inflicts, or attempts to inflict, injury or discomfort upon another (the “victim”) (6). Negative actions can be verbal, including threatening, taunting, teasing, name-calling, or physical actions, such as hitting, kicking, pushing, shoving or pinching (6).

Researchers have documented how bullying behaviour has an injurious effect on both victims and offenders (7, 8), being associated with negative outcomes such as psychological maladjustment (psychological well-being, self-esteem, and self-confidence) and psychosomatic health problems (9, 10).

A huge, international study investigating the prevalence of bullying victimization in 66 countries reported that on average 32.1% of the children had been bullied at school at least once within the 2 months prior, while the prevalence was higher (37.4%) within the time span of 30 days prior (11). According to the available evidence, several countries implemented secondary prevention programs for preventing violent episodes at school, also documenting the effectiveness of some short-term measures (12).

In Italy, bullying involves a consistent percentage of school-age children; with 2 out of 10 students aged 11-17 declaring to have been a victim of bullying. During 2014, bullying occurred two or more times in a month, with a higher prevalence documented for girls (13).

According to the latest available data from the Health Behaviours in School-aged Children (HBSC) surveillance system, the estimated prevalence of children aged 11 to 15 who declared to have had undergone at least one act of bullying within the two months prior in Sicily was only 14% (14).

Since 2007, the Italian Ministry of Education has promoted activities to face and prevent bullying at schools of all levels and Local Health Authorities are implementing effective social-health strategies, too (15).

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In Sicily, the Regional Education Authority was one of the first in Italy to activate a Regional Observatory, which was also in charge of developing operational tools, such as guidelines, for preventing bullying in schools.

Anyway, the lack of consistent data needed to properly describe how this phenomenon of Public Health concern is increasing prevents both the ability to systematically survey and measure the effectiveness of the public health strategies against bullying that may be implemented in Sicily: the 2014-2018 Sicilian Regional Prevention Plan (16) calls for action to promote mental well-being in children, adolescents and young people (objective 2.3).

The Bullying In Sicilian Schools (BIAS) pilot study's aims to estimate prevalence of bullying in Sicilian schools and to assess the feasibility of alternative methods for its detection.

## 2. Methods

### Study design and population

A pilot cross-sectional, self-report, survey will be carried out using an open access web-based platform. The study population will include all the 22,455 school-aged children, attending one of the 58 secondary first-grade schools of Palermo city, Italy.

The following criteria will be considered for study recruiting:

- Inclusion criteria: all children present at school on the day of the survey.
- Exclusion criteria: children whose parents do not authorize participation in the study; children not present at school on the day of the survey; children with serious mental disabilities.

### Schools and students sampling

A two-stage cluster sampling process will be performed. The study population needed is 555 students, as this estimate was calculated on the basis of 14% bullying among Sicilian students (prevalence), with a 99.9% desired level of significance and an average number of 20 students per class. Schools will be considered as primary units of the sampling, while classes as secondary units. Based on neighbourhood socio-economic index, the 58 schools of Palermo city will be categorized in three levels by: high (A), medium (B) and low (C). Then, at least three schools from each level will be sampled. In a second step, a minimum of 4 classes in each school will be sampled for a total of 36 classes. By the end, a total of 720 students will be invited to participate in the study, equally allocated among second and third classes.

### Questionnaires

The study variables were selected after an extensive research on the available national and international evidence, including grey literature. The definition of bullying used in BIAS was consistent with the one provided by the World Health Organization: "A person is bullied when he or she is exposed, repeatedly and over time, to negative actions on the part of one or more other persons. Bullying often occurs in situations where there is a power or status difference. Bullying includes actions like threatening, teasing, name-calling, ignoring, rumour spreading, sending hurtful emails and text messages, and leaving someone out on purpose" (18).

The classification of the various types of bullying and their characteristics will be further defined according to the Olweus questionnaire, adapted to the local context with the contribution of local experts from the

Educational and Psychological local institutions (17).

Two different questionnaires, one for teachers and one for students, will be administered.

For the students, six areas (verbal, physical and indirect bullying, prosociality, resilience and observers) have been identified to extensively evaluate the bullying phenomenon among school-aged children in the previous year (Appendix 1). In particular, 30 items, will be investigated using a 5-points Likert scale:

1. Never
2. Rarely (only once or twice)
3. Occasionally (three to six times)
4. Often (about once a week)
5. Very often (several times a week)

Furthermore, in order to assess bullying 3 different methodological approaches will be used:

- i) A specific "sentinel" question has been proposed for each one of the six areas. Then, answers will be categorized in "presence of bullying" (occasionally, often, very often) and "absence of bullying" (never, rarely).
- ii) Every child answering "occasionally, often, very often" to at least one question exploring an item within a specific area will be considered a victim of bullying.
- iii) The following scores will be assigned for every single answer: Never = 0, Rarely = 1, Occasionally = 2, Often = 3, Very often = 4. The value of 7 as the sum of every area will be considered the cut-off to define a victim of bullying. Specifically, a 7-point score will forecast at least one "occasionally" response or two "rarely" responses for a single area.

Each of the three methods will be applied for every explored area and the K-Cohen index will be calculated in order to verify the concordance between the different approaches. Lastly, the teacher questionnaire, consisting of 11 items, was designed to investigate types of bullying, places where bullying was performed, the number of students involved, action taken to face or prevent bullying at school, the main characteristics of bullies, victims or observers (Appendix 2).

### Data collection

Both the questionnaires will be self-administered by teachers and students through a dedicated online form developed on the open source platform "Google Form". Data will be extracted in an excel file and imported in STATA 14.2 to perform statistical analysis.

The students' questionnaire will be presented to at least one teacher (preferentially to the bullying referent when present), during a dedicated meeting to present the project, organized by the research group in collaboration with the Regional Educational Authority.

Before the survey date, an informative note and a consent for participation in the study addressed to the parents will be delivered to the children of all classes.

The survey will be carried out in the informatics school labs and at least two months after the beginning of the school year activities.

On the day of questionnaires' administration, teachers will read the instructions to be followed by the student, already available in digital format only.

The teachers' questionnaire will be presented by the bullying referent to all the other teachers in charge of the classes and will be collegially discussed and completed.

### Statistical analysis

Prevalence of bullying by different types and protective attitudes (physical, verbal, indirect, prosociality, observers, resilience) with its Confidence Interval at 95% will be estimated.

The distribution of the different variables will be explored by the Kolmogorov-Smirnov test. Absolute and relative frequencies were calculated for qualitative variables. The normal distribution of quantitative variables will be calculated as mean (SD) and those not normally distributed as median (IQR). Any differences between the normal variables will be evaluated with ANOVA, while the Mann-Whitney test will be utilized for the variables not normally distributed. The Chi-squared test will be used for the qualitative variables.

Later, the variables with results associated with the greatest risk of bullying ( $p < 0.25$ ) at the univariate analysis will be selected to generate a multivariate logistic regression model.

### Ethical issue

The confidentiality of the personal information collected will be guaranteed as all data will be treated anonymously. Consent for study participation will be obtained from each child's parents. In addition, the teacher will inform the children in the most appropriate way before starting the compilation. All informatics support dedicated to data collection, storage - even temporary - and processing have been provided with adequate security and protective mechanisms to prevent the access of data by unauthorized persons. The BIAS project obtained the approval of the "Palermo Ethical Committee 1" on July 12, 2017 (protocol number: 07/2017).

## 3. Conclusions

According to our knowledge, the BIAS project represents one of the first studies in Europe, and the first in Italy, aiming to estimate the prevalence of bullying using different methodological approaches. To date, the only data available for bullying were derived from a national survey among school-aged children (HBSC) that analyze, predominantly: life-styles, attitudes and habits of Italian adolescents, and posed only a generic question referred to potential episodes of bullying experienced within the two months prior (without a specify type of bullying nor the role of the observer implicated). Most likely, data obtained from the HBSC surveillance system underestimate (and are thus not representative of) the real burden of phenomenon. Furthermore, the feasibility of the three different methods proposed to estimate the prevalence of bullying will be evaluated after the data collection, and could represent reproducible tools for similar survey in other contexts.

In a further phase, the BIAS project contemplates a preventive intervention, evidence-based and adapted to the local context, and the evaluation of its effectiveness in preventing or reducing bullying.

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#### Appendix 1 - Questionnaire for students

Gender: ☐ Male ☐ Female      Age : \_\_\_\_\_      Nationality: ☐ Italian ☐ Foreign

Class attended: ☐ second class ☐ third class      School denomination: \_\_\_\_\_

*Verbal bullying*

1) Since I started first-grade secondary school, another boy or girl has insulted me (even online, for example WhatsApp, Facebook)

5) Since I started first-grade secondary school, another boy or girl has been rude to me

6) Since I started first-grade secondary school, another boy or girl has threatened me (even online, for example WhatsApp, Facebook)

8) Since I started first-grade secondary school, another boy or girl has called me an offensive nickname

21) Since I started first-grade secondary school, another boy or girl has made fun of me along with a group of other boys or girls (even online, for example WhatsApp, Facebook)

*Indirect Bullying*

2) Since I started first-grade secondary school, another boy or girl has said bad things about my family

10) Since I started first-grade secondary school, another boy or girl has turned other boys or girls against me (even online, for example WhatsApp, Facebook)

11) Since I started first-grade secondary school, another boy or girl wanted me to hurt others

14) Since I started first-grade secondary school, another boy or girl forced me to do something I did not want to do

23) Since I started first-grade secondary school, during recess I was often alone

*Physical Bullying*

3) Since I started first-grade secondary school, another boy or girl tried to attack me

4) During primary school, another boy or girl tried to attack me

7) Outside school, another boy or girl tried to attack me

9) Since I started first-grade secondary school, another boy or girl has hurt me alongside other boys or girls

16) Since I started first-grade secondary school, another boy or girl has stolen something from me

*Prosociality*

12) Since I started first-grade secondary school, I was bullied and I talked about what happened to a teacher

13) Since I started first-grade secondary school, another boy or girl has helped me when I needed it

18) Since I started first-grade secondary school, I helped a classmate in times of difficulty

19) Since I started first-grade secondary school, I was bullied and other boys or girls helped me

22) Since I started first-grade secondary school, I was bullied and a teacher helped me

*Resilience*

15) Since I started first-grade secondary school, I was bullied and I talked about what happened with my family

17) Since I started first-grade secondary school, I was bullied and I talked about what happened with my classmates

26) Since I started first-grade secondary school, if I am bullied, I talk about it with teachers

27) Since I started first-grade secondary school, if I am bullied, I rebel

28) Since I started first-grade secondary school, if I am bullied, I talk to someone

*Observers*

20) Since I started first-grade secondary school, another boy or girl has stood aside and observed while I was being bullied

24) Since I started first-grade secondary school, I have seen a friend bullied and I did nothing

25) Since I started first-grade secondary school, I have seen a friend in difficulty, but I preferred to mind my own business

29) Since I started first-grade secondary school, I saw a friend of mine called an offensive nickname (even online, for example WhatsApp, Facebook) by another boy or girl, but I preferred to mind my own business

30) Since I started first-grade secondary school, I saw a friend insulted (even online, for example WhatsApp, Facebook) by another boy or girl, but I preferred to mind my own business

Feel free to express your thoughts on the topics presented in this questionnaire.

#### Appendix 2 - Questionnaire for Class Council Components

School denomination \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_/\_\_\_\_/\_\_\_\_

Number of teachers present \_\_\_\_\_ Total Number of class council participants \_\_\_\_\_

*Note: The definition of bullying and cyberbullying were stated in the introduction of this questionnaire.*

Have there been any episodes of bullying among students in your class in the last two months? ☐ Yes ☐ No

*If you answered "No" to the previous question, it is not necessary to continue.*

What type of bullying most frequently occurs among your students? ☐ Verbal ☐ Physical ☐ Indirect

In which places have they occurred? ☐ Classrooms ☐ Hallways ☐ Bathrooms ☐ School entrance ☐ Outside the school

Regarding this class, in your opinion, how many students have been involved? (total estimate of victims and bullies)

☐ A few ☐ At least five ☐ More than five

Did victims talk to someone about the bullying they suffered from?

☐ Yes, with teachers ☐ Yes, with classmates ☐ Yes, with parents ☐ No

Did any other participant of the class report the episodes of bullying? ☐ Yes ☐ No

When you've confronted the bullying, have you received more support from...

☐ Colleagues ☐ Headmaster ☐ Families

In your opinion, could an educational intervention change this attitude? ☐ Yes ☐ No ☐ I Don't know

If yes, which type of intervention would you suggest?

In your opinion, what are the three main characteristics of bullies?

In your opinion, what are the three main characteristics of victims?

In your opinion, what are the three main characteristics of observers?